REMARKS

Claims 4, 7, 10, 29 and 30 have been canceled herein. Claims 1-3, 5, 8, 11-24, 27-28, 31 and 36-37 remain pending following entry of this amendment.

Applicant has amended independent medium claim 27 to recite a "computer-readable storage medium" as suggested by the Examiner.

Summary of Claimed Invention

The claimed invention claims a method for cross-referencing, searching and displaying entries in a document publishing system. Each entry has a metastructure associated with it. When changes are made to a selected entry or a label associated with the entry, a new entry with an entry identification number is created. The new entry containing the changes is cross-linked with the original selected entry. The metastructure is then updated to reflect the relationship changes caused by the new entry. The metastructure maintains a list of the relationship changes and the time the changes were made thus showing how the entry has evolved over time. The cross-linking of entries enables users to search by time (the data/content of the entry at a particular time), by topic (the label associated with an entry or part of an entry at specified times), or both. Searching may also be conducted using labels or topics as keywords such that either user-attached labels or automatically generated labels from the cross-linking algorithms are used to generate documents for users which display references to entries and/or items containing the particular label or topic.

Claim Rejections Pursuant to 35 U.S.C. §103

Claims 1-5, 7-8, 10-24, 27-31 and 36-37 were rejected under 35 U.S.C. 103(a) as being unpatentable over Rivette et al (United States Patent Number 5,806,079, hereafter "Rivette") in view of Ryan et al. (United States Patent Number 6,421, 675, hereafter "Ryan") in further view of Davis (United States Patent Number 6,920, 608, hereafter "Davis"). For the reasons set forth below, these rejections are respectfully traversed.

Claim 1 as amended recites:

1. A computer-implemented method, comprising:

   parsing a plurality of entries containing data into one or more parts, each entry associated with a metastructure containing metadata;

   attaching a user-provided label to a user-selected part of a selected entry selected from the plurality of entries, the label being added to the metadata for the selected entry so that the label is cross-indexed with the selected entry, cross-indexed with the user-selected part and cross-indexed with other entries containing the label;

   altering the data contained in the selected entry to create an updated entry;

   cross-indexing the updated entry with the selected entry;

   updating the metastructure associated with the selected entry to reflect relationship changes caused by the updated entry, the updating including a time the selected entry was altered, the metastructure associated with the selected entry maintaining a list of at least one relationship change between the selected entry and at least one other entry that shows an evolution of the selected entry over a time period that includes a time period before the updating;

   displaying the updated entry in response to a request for the selected entry;

   receiving selections, via at least one displayed selector, of a time slice and a perspective to apply to the selected entry, the time slice corresponding to a period of time, the perspective being a date reference that controls a selection of labels displayed with the selected entry based on when the labels were associated with the selected entry;

   consulting the metastructure associated with the selected entry to retrieve relationship changes for the selected entry during the selected time slice and perspective; and

   displaying a view of the selected entry governed by the time slice and perspective, the view displaying the data for the selected entry as it existed during the selected time slice and displaying labels for the selected entry based on the selected perspective.

Applicants respectfully submit that the combination of Rivette in view of Ryan in view of Davis fails to disclose all of the claim elements found in claim 1.

Summary of Rivette

Rivette discusses a mechanism for manipulating notes linked to data objects. The system describes the creation of notes which include one or more sub-notes which are linked to data objects associated with different applications (word processors, spreadsheets, database applications etc.).   The associated portions to which the sub-notes are linked may overlap between sub-notes. The user is able to access the data object through the sub-notes and the linkage between sub-notes and data objects and between sub-notes may be adjusted by the user.

<u>Argument</u>

Applicants' claimed invention allows a user to track the transformation and evolution of a data object and its associated labels over time. A metastructure is associated with each entry and includes information which allows the evolution of the object and its associated labels to be followed over time as the data object is altered and new labels are added, deleted or changed.

Rivette fails to disclose or suggest "altering the data **contained in the selected entry** to create an updated entry" as recited in claim 1. Rivette discusses the application of notes to underlying data objects. Rivette is designed for a user to coordinate their notes on a project and allow the notes to be used as a basis to retrieve the actual data object (see col. 6, lines 6-12, Rivette). In contrast to Applicants' claimed invention, the system in Rivette is not designed to track the evolution of the underlying data object but rather is focused on the notes associated with the data objects. Rivette discusses the ability to generate different sub-notes linked to different portions of a data object but does not discuss the alteration of the underlying data object or a label for the data object. The Examiner cited Figures 3B and 7B and col. 30, lines 42-65 (see page 3 OA) as disclosing "altering the data **contained in the selected entry** to create an updated entry". Applicants respectfully submit that these sections of Rivette fail to disclose or suggest the claimed limitation.

Figure 3B in Rivette depicts the application of different sub-notes to different portions of underlying data objects. The sub-notes are associated with the underlying objects but do not alter or change the data in the underlying object ("More particularly, each sub-note 316 is linked to a portion 322 of a data object 320", Rivette discussing Figure 3B at col. 11, lines 60-61). There is no discussion of the note system altering the data in the underlying object. Similarly in Figure 7B, the corresponding description (col. 15, lines 36-48) is discussing the ability of sub-notes to be applied to overlapping text sections. Again, there is no discussion of "altering the data" in the object. Col. 30, lines 42-65 in Rivette merely discuss the information used to map the note to the object. There is no discussion of altering data in the underlying data object. **The "notes" in Rivette are external to the underlying data objects (and in fact the Examiner analogized that they were akin to "labels", see Office Action page 4 bottom, "label reads on**

note"). Consistent with the Examiner's analogy, the underlying objects in Rivette correspond to the claimed "selected entry" (as <u>notes cannot read on both selected entry and label in Applicants' claims</u>) and there is no indication that the data in these underlying objects associated with the notes/labels are altered by the Rivette system. Figures 6A and 6B in Rivette discuss altering a view of a data object but this is not the same as altering the data in the object. Accordingly, for at least these reasons, Rivette in view of Ryan in view of Davis fail to disclose this limitation.

For similar reasons, Rivette in view of Ryan in view of Davis fails to disclose "updating the metastructure associated with the selected entry to reflect relationship changes caused by the updated entry, the updating including a time the selected entry was altered" as recited in claim 1. As noted above, Rivette does not disclose "altering the data **contained in the selected entry**" and so therefore does not update the metastructure to reflect relationship changes **caused by the update of the selected entry** (because there was no updating of the selected entry).

The Examiner cited Rivette at col. 30, lines 22-36 (see OA, page 3 as disclosing "updating a metastructure associated with said selected entry to reflect relationship changes caused by said new[updated] entry, said updating including a time said selected entry was altered". The cited section fails to disclose the updating of the metastructure to reflect an alteration of the data in the selected entry associated with a note. The cited section in Rivette discusses the linking of the data object to a new sub-note (col. 30, lines 22-23). It discusses the updating of a view of the linkage of the data object and the active note (col. 30, lines 23-25). It discusses the storage of information identifying the data object in a field of the new sub note node (col. 30, lines 28-30). It indicates an example of the information as the name of the data object (col. 30, line 31). It discusses information identifying the application associated with the data object may be stored (col. 30, lines 31-33). It also indicates that the information to be stored in the object identifier field may be obtained by querying the application associated with the data object (col. 30, lines 34-36). It does <u>not</u> disclose Applicants' claim requirements of updating a metastructure associated with the selected entry to reflect the time of the altering of the selected entry.

As an additional reason for allowance, Applicants have amended claim 1 to recite **"receiving selections, via at least one displayed selector, of a time slice and a perspective** to

apply to the selected entry, the time slice corresponding to a period of time, the perspective being a date reference that controls a selection of labels displayed with the selected entry based on when the labels were associated with the selected entry. Applicant's claimed invention provides the ability to adjust both the view of the selected entry to display the evolution of the content of the selected entry based on the time (time slice) and the time labels changed (perspective) (see for example, application page 13, lines 21-34 and Figure 5, time slice selector 106 and perspective selector 156). This granularity and flexibility provided via at least one displayed selector is not disclosed or suggested in the cited combination of references.

Since the cited combination of references fails to disclose the "displayed selector" used to receive the selection of a time slice <u>and</u> perspective, they also fail to disclose:

> consulting the metastructure associated with the selected entry to retrieve relationship changes for the selected entry **during the selected time slice and perspective**; and
> displaying a view of the selected entry governed by the time slice and perspective, **the view displaying the data for the selected entry as it existed during the selected time slice and displaying labels for the selected entry based on the selected perspective**

as recited in Applicants' claim 1.

With regard to now canceled claim 30, the Examiner had suggested that the claim limitations of "select a time slice to apply to a selected entry, said time slice corresponding to a period of time" and "select a perspective to apply to said selected entry, said perspective being a date reference controlling which of the plurality of labels referencing said selected entry to display with said selected entry" were disclosed by Rivette at col. 21, lines 29-36 and col. 30, lines 22-50, respectively (see OA page 13) and that . Applicants respectfully disagree and submit that these rejections may not be applied to claim 1 as amended.

Col. 21, lines 29-36 of Rivette is discussing the search capabilities used to search the notes database and source material so as to create a new database(depicted in Figure 33). The general reference to searching based on time (line 34) is referring to the creation/modification of links between the notes and underlying data objects (depicted in Figure 29), not the consultation of a metastructure that tracks relationship changes of the selected entry (caused by updating the

data **in the selected entry**) over time as in Applicants' claimed invention. As noted above, Rivette does not track the evolution of the data in the underlying object but rather is directed to tracking notes associated with data objects.

Col. 30, lines 22-50 does not disclose "select a perspective to apply to said selected entry, said perspective being a date reference controlling which of the plurality of labels referencing said selected entry to display with said selected entry" as suggested by the Examiner. At most this section graphically depicts a linkage between the note and the data object (lines 23-25). There is no discussion however that this depicted linkage is controlled by a date reference.

Additionally with regard to claim 30 (OA, page 13), the Examiner had suggested that col. 21, lines 29-36 of Rivette disclosed "display said selected entry constrained by said time slice and said perspective." Applicants respectfully disagree. As discussed above, the general reference to searching based on time in the cited section is inapplicable to Applicants' claimed invention. Rivette is concerned with note associations (and is discussing searching note linkages) rather than the evolution of an underlying data object and so does not track the evolution of the data object in Applicants' claimed metastructure.

Applicants respectfully submit that the amendments to claim 1 have rendered a discussion of Davis moot.

Independent claim 27 as amended corresponds to claim 1 and Applicants respectfully submit that it is allowable for the same reasons. Applicants submit that all of the pending dependent claims are allowable at least by virtue of their dependency on independent claims 1 and 27.

CONCLUSION

In view of the above, Applicants believe the pending application is in condition for allowance.

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